

INDEX
RUBBER CHEMISTRY AND TECHNOLOGY
VOLUME 52, 1979
AUTHOR INDEX*

- ANDRIES, J. C., C. K. RHEE, R. W. SMITH, D. B. ROSS, AND H. E. DIEM, A surface study of ozone attack and antiozonant protection of carbon black loaded natural rubber compounds, (4) 823
ANOLICK, C., G. S. COOK, AND C. W. STEWART, Flammability properties of carpets with polychloroprene latex foam underlays, (4) 871
ANZAI, S., see FUJIO, R., (1) 74
AUDA, R. S., see OTTERSTEDT, C. W., (4) 899
- BERENS, A. S., Rotary shaft seals in the automotive industry (Abstract), (4) 901
BERNARD, D., Natural rubber research—perspectives and strategies (Abstract), (2) 426
BHOWMICK, A. K., R. MUKHOPADHYAY, AND S. K. DE, High temperature vulcanization of elastomers, (4) 725
—, AND S. K. DE, Dithiodiomorpholine-based accelerator system in tire tread compound for high temperature vulcanization, (5) 985
BLODGETT, R. B., Ethylene-propylene rubber and crosslinked polyethylene as insulations for 90°C medium voltage cables, (2) 410
BODY, R. W., see COMEN, A. L., (2) 431
BOYER, A. H., see MERCER, H. N., (2) 377
BRAME, E. G. JR., AND H. E. HOLMQUIST, ^{13}C NMR analysis of carbon-13 enriched ethylene copolymers with propylene, (1) 1
BRAZIER, D. W., AND G. H. NICKEL, Application of TMA for rapid evaluation of low-temperature properties of elastomer vulcanizates, (4) 735
BREIDENBACH, R. F., AND G. J. LAKE, Mechanics of fracture in two-ply laminates, (1) 96
BRICHZIN, D., see KLINGENSMITH, W. H., (2) 434
BRIGGS, G. J., J. M. HOLMES, AND Y. K. WEI, Effect of labile crosslinked SBR on the green strength and hysteresis of radial tire compounds (Abstract), (4) 897
BROWN, W. A., D. E. SCHLEIFER, AND A. C. PATEL, Void volume and the identification of recovered carbon blacks (Abstract), (4) 896
BRULLO, R. A., W. DE MOULLY, AND A. T. WORM, A new class of processing agents for elastomers (Abstract), (4) 902
BRUZZONE, M., Elastomer structures and cold crystallization, (1) 207
BULLMAN, G. W., see STIEHLER, A. D., (2) 255
BURGESS, K. A., AND C. E. SCOTT, Outlook for carbon black development (Abstract), (2) 427
- CADLE, S. H., AND R. L. WILLIAMS, Gas and particle emissions from automobile tires in laboratory and field studies, (1) 146
CASPARY, R., AND P. KRETSCHMER, Ultrasonic measurements with rubber compounds during extrusion, (2) 294
CHEHEBAR, A. L., AND E. J. GALLI, Optimum choice for reference temperature in evaluation of curing cycles, (2) 286
CHERICQ, V. E., see VEITH, A. G., (4) 748
CODDINGTON, D. M., Inflation pressure loss in tubeless tires—effects of tire size, service, and construction, (5) 905
COLLINS, E. A., D. J. HOFFMAN, AND P. L. SONI, Rheology of plastisols of poly(vinyl chloride), (3) 676
COMEN, A. L., AND R. W. BODY, Peroxide cured EPDM in wire and cable applications (Abstract), (2) 431
COOK, G. S., see ANOLICK, C., (4) 871
COTTEN, G. R., Influence of carbon black on processability of rubber stocks. II. extrusion, (1) 187

* Prepared by L. E. Gwin.

- , Influence of carbon black on processability of rubber stocks. IV. kinetics of extrusion shrinkage, (1) 199
CURTISS, W. W., see KNILL, R. B., (2) 428
- DE, S. K., see MUKHOPADHYAY, R., (2) 263
—, see BHOWMICK, A. K., (4) 725
—, see BHOWMICK, A. K., (5) 985
DECKER, G. E., see STIEHLER, A. D., (2) 255
DE MARCO, R. D., New generation polyacrylate elastomers, (1) 173
DE MOULLY, W., see BRULLO, R. A., (4) 902
DEVINEY, M. L., see MERCER, H. N., (2) 377
DIEM, H. E., see ANDRIES, J. C., (4) 823
DIMAURO, P. J., H. L. PARIS, AND M. A. FATH, Wax protection, (5) 973
DUNN, J. R., H. A. PFISTERER, AND J. J. RIDLAND, NBR vulcanizates resistant to high temperature and "sour gasoline", (2) 331
- EDWARDS, D. C., AND K. SATO, Nitrile rubber functionalized for silica reinforcement, (1) 84
EDWARDS, K., see LAUTENSCHLAEGER, F., (5) 1050
EDWARDS, W. S., see TIMAR, J., (2) 319
ERMAN, B., AND P. J. FLORY, Rubber elasticity in the range of small uniaxial tensions and compressions. Results for poly(dimethylsiloxane), (1) 127
- FALENDER, J. R., AND G. S. Y. YEH, The effect of crosslink distribution on elastomeric properties. II. Poly(dimethylsiloxane) networks prepared from polymers having high, intermediate, and low site selectivity (Abstract), (2) 425
FARRIS, R. J., Rubber heat engines, analysis and theory, (1) 159
FATH, M. A., see DIMAURO, P. J., (5) 973
FLORY, P. J., Theory of elasticity of polymer networks. The effect of local constraints on junctions, (1) 110
—, see ERMAN, B., (1) 127
FREAKLEY, P. K., AND W. Y. WAN INDRIS, Visualization of flow during the processing of rubber in an internal mixer, (1) 134
FROHLICH, A., see KLINGENSMITH, W. H., (2) 434
FUJIO, R., M. KITAYAMA, N. KATAOKA, AND S. ANZAI, Effects of sulfur on the peroxide cure of EPDM and divinylbenzene compounds, (1) 74
- GABRIEL, A. P., EPR telephone drop wire, a new dimension in telephone drop wire, (2) 400
GALLI, E. J., see CHEHEBAR, A. L., (2) 286
GENT, A. N., AND G. R. HAMED, Peel mechanics for an elastic-plastic adherend, (5) 1057
GHATGE, N. D., AND N. N. MOLDAR, The vulcanization of styrene-butadiene rubber with 2-pentadecylbenzoquinone dioxime, (2) 353
GOETTLER, L. A., R. I. LEIB, AND A. J. LAMBRIGHT, Short fiber reinforced hose—a new concept in production and performance, (4) 838
GOKEN, G. L., The role of elastomers in adhesives (Abstract), (4) 901
GRAESSLEY, W. W., see PEARSON, D. L., (2) 304
GREGORY, M. J., Selection of carbon black fillers for rubber springs, (5) 996
- HAGER, T., A. MACARTHUR, D. MCINTYRE, AND R. SEEGER, Chemistry and structure of natural rubbers, (4) 693
HAMED, G. R., see GENT, A. N., (5) 1057
HARRELL, E. R., see NAKAJIMA, N., (1) 9
—, see NAKAJIMA, N., (5) 962
HEWITT, N. L., see WAGNER, M. P., (4) 805
HO, C. C., AND J. R. JOHNSON, An improved thermoplastic elastomer for gasket applications (Abstract), (4) 902
HOFFMAN, D. J., see COLLINS, E. A., (3) 676
HOLMES, J. M., see BRIGGS, G. J., (4) 897
HOLMQUIST, H. E., see BRAME, E. G. JR., (1) 1
HORVATH, J. W., High performance nitrile rubber automotive fuel hose, (4) 883
- IZAWA, M., see MINOURA, Y., (5) 920
- JOHNSON, J. R., see HO, C. C., (4) 902
JOWETT, F., The protection of rubber by petroleum waxes (Abstract), (4) 895

- KAINRADL, P., Critical reflections on physical and technological test methods in the rubber industry, (2) 232
- KATAOKA, N., see FUJIO, R., (1) 74
- KILLGOAR, P. C., see TABAR, R. J., (4) 781
- KITAYAMA, M., see FUJIO, R., (1) 74
- KLINGENSMITH, W. J., D. BRICHZIN, AND A. FROHLICH, Processing agents in elastomer compounds for the cable industry (Abstract), (2) 434
- KNILL, R. B., W. W. CURTIS, AND J. P. URBN, Current trends in tire technology (Abstract), (2) 428
- KOBAYASHI, K., see KUSANO, T., (4) 773
- KOHMOTO, S., see MINOURA, Y., (5) 920
- KRATOCHVIL, P., see STEJSKAL, J., (1) 20
- KRAUS, G., AND K. W. ROLLMAN, The entanglement plateau in the dynamic modulus of rubbery styrene-diene block copolymers. Significance to pressure sensitive adhesive formulations, (2) 278
- KRAUSE, J. W., Automatic control and measurement of the tread extrusion process (Abstract), (4) 903
- KRETSCHMER, P., see CASPARY, R., (2) 294
- KRUEGER, R. A., Future directions in elastomer research and development (Abstract), (2) 426
- KUSANO, T., K. KOBAYASHI, AND K. MURAKAMI, Mechanical chain scission in rubber vulcanizate at low temperatures, (4) 773
- LAKE, G. J., see BREIDENBACH, R. F., (1) 96
- LAMBRIGHT, A. J., AND J. B. PUTMAN, Salt bath curing for the wire and cable industry (Abstract), (2) 432
- , see GOETTLER, L. A., (4) 838
- LARSEN, E. R., AND R. B. LUDWIG, Chemical theory and mechanism of halogen's flame suppressing properties (Abstract), (2) 430
- LAUTENSCHLAEGER, F. K., Model compound vulcanization. Part I., (2) 213
- , AND P. ZEEMAN, Model compound vulcanization. Part II., (5) 1030
- , Model compound vulcanization. Part III. The relationships between sulfidic product yield and stress-strain properties, (5) 1044
- , AND K. EDWARDS, Model compound vulcanization. Part IV. Comparative assessment of a sulfenamide accelerator and a triazine-type accelerator, (5) 1050
- LE BRAS, J., AND E. PAPIER, The filler-elastomer chemical link and the reinforcement of rubber, (1) 43
- LEE, B., On the reinforcement of uncured and cured rubber polymer composite materials and its relationship to dispersive mixing—an interpretation of cure meter rheographs of carbon black loaded SBR and *cis*-polybutadiene compounds, (5) 1019
- LEIB, R. I., see GOETTLER, L. A., (4) 838
- LOU, A. Y. C., AND J. D. WALTER, Interlaminar shear strain measurements in cord rubber composites, (4) 792
- LUDWIG, R. B., see LARSEN, E. R., (2) 430
- LUTHER, R., Performance requirements for rubber-insulated cables in nuclear generating stations (Abstract), (2) 432
- MACARTHUR, A., see HAGER, T., (4) 693
- MARSH, H. A., see SCHOENBERG, E., (3) 526
- MARSLAND, J. E., Marketing cost-performance analysis for olefinic thermoplastic elastomers (Abstract), (2) 435
- MATSUO, T., see MINOURA, Y., (5) 920
- MC CORMICK, C. E., see WEST, J. R., (4) 896
- MC INTYRE, D., see HAGER, T., (4) 693
- MEIER, J. F., G. E. RUDD, AND D. F. WEIR, Creep resistant elastomer formulations, (1) 50
- MERCER, H. N., A. H. BOYER, AND M. L. DEVINEY, 3-D carbon black primary structure characterization via a new electron microscopy-photogrammetry technique, (2) 377
- MEYER, D. A., Research direction in non-tire rubber products (Abstract), (2) 428
- MINOURA, Y., S. YAMASHITA, H. OKAMOTO, T. MATSUO, M. IZAWA, AND S. KOHMOTO, Crosslinking and mechanical properties of liquid rubber. I. Curative effect of aliphatic diols, (5) 920
- MOLDAR, N. N., see GHATGE, N. D., (2) 353
- MORGAN, R. M., Nonlead stabilization of chlorinated polyethylene in wire and cable (Abstract), (2) 434

- MORIN, P. R., Olefinic thermoplastic elastomer applications as jacketing and insulating materials for wire and cable (Abstract), (2) 433
- MUKHOPADHYAY, R., AND S. K. DE, Effect of vulcanization temperature and different fillers on the properties of efficiently vulcanized natural rubber, (2) 263
—, see BHOWMICK, A. K., (4) 725
- MURAKAMI, K., see KUSANO, T., (4) 773
- NAKAJIMA, N., AND E. R. HARRELL, Method of obtaining viscosity curves with Mooney rheometer, (1) 9
—, see —, Correction for edge effect of Mooney rheometer, (5) 962
- NELSON, P. D., AND R. F. OHM, Fluid resistance of Norsorex polynorbornene (Abstract), (2) 435
—, see —, Heat resistance of Norsorex polynorbornene (Abstract), (4) 903
- NICKEL, G. H., see BRAZIER, D. W., (4) 735
- NYE, H. F., Specification and polymers used in the cable industry (Abstract), (2) 431
- OHM, R. F., see NELSON, P. D., (2) 435
—, see NELSON, P. D., (4) 903
- OKAMOTO, H., see MINOURA, Y., (5) 920
- OTTERSTEDT, C. W., AND R. S. AUDIA, Factors influencing the temperature rise of EPDM in continuous vulcanization media (Abstract), (4) 899
- PAPIERER, E., see LE BRAS, J., (1) 43
- PARIS, H. L., see DIMAURO, P. J., (5) 973
- PATEL, A. C., AND E. J. WEAVER, An experiment to characterize carbon black via capillary rheometer (Abstract), (2) 429
—, see BROWN, W. A., (4) 896
- PATEL, H. P., see WALTER, J. D., (4) 710
- PEARSON, D. L., AND W. W. GRAESSLEY, The structure of rubber networks with multifunctional junctions, (2) 304
- PERCIVAL, W. C., see SIMPSON, M. B. H., (4) 899
- PETT, R. A., see TABAR, R. J., (4) 781
- PFISTERER, H. A., see DUNN, J. R., (2) 331
- PHILLIPS, B. A., AND R. P. TAYLOR, Polyurea dispersions for RIM applications, (4) 864
- PIERCE, O. R., see WARRICK, E. L., (3) 437
- POLMANTEER, K. E., see WARRICK, E. L., (3) 437
- PORTER, L. S., AND H. L. STEPHENS, Effect of compounding variations on the properties of grayule rubber, (2) 361
- PUTMAN, J. B., see LAMBRIGHT, A. J., (2) 432
- RAILSBACK, H. E., see WILDER, C. R., (4) 895
- RAINS, R. K., see SHEN, H. S., (4) 764
- RHEE, C. K., see ANDRIES, J. C. (4) 823
- RIDLAND, J. J., see DUNN, J. R., (2) 331
- ROBERTS, A. D., Looking at rubber adhesion, (1) 23
- ROLLMAN, K. W., see KRAUS, G., (2) 278
- ROSS, D. B., see ANDRIES, J. C., (4) 823
- RUDD, G. E., see MEIER, J. F., (1) 50
- SAAM, J. C., see WARRICK, E. L., (3) 437
- SALOVEY, R., Technology transfer between rubber and plastics industries (Abstract), (2) 429
- SALTMAN, W. M., see SCHOENBERG, E., (3) 526
- SATO, K., see EDWARDS, D. C., (1) 84
- SCHLEIFER, D. E., see BROWN, W. A., (4) 896
- SCHOENBERG, E., H. A. MARSH, S. J. WALTERS, AND W. M. SALTMAN, Polyiosprene, (3) 526
- SCOTT, C. E., see BURGESS, K. A., (2) 427
- SCOTT, G., AND K. V. SMITH, Mechanisms of antioxidant action: Rubber bound antioxidants based on nitrones—I. Non-sulfur vulcanizates, (5) 949
- SEAGER, R., see HAGER, T., (4) 693
- SEYMOUR, D. C., The theory of power cable vulcanization without steam (Abstract), (2) 433
- SHEN, H. S., AND R. K. RAINS, Scale-up of short fiber composite mixing, (4) 764
- SIMPSON, M. B. H., AND W. C. PERCIVAL, The exothermic decomposition of litharge-elastomer dispersions (Abstract), (4) 899

- SMITH, K. V., see SCOTT, G., (5) 949
SMITH, R. W., see ANDRIES, J. C., (4) 823
SMITH, W. C., A historical review of elastomers in wire and cable (Abstract), (2) 429
SOLOMON, T. S., Adhesion retention of tire cords using Carboset resins in cord adhesives (Abstract), (4) 898
SONI, P. L., see COLLINS, E. A., (3) 676
SOUTHERN, E., AND A. G. THOMAS, Studies of rubber abrasion, (5) 1008
STEJSKAL, J., AND P. KRATOCHVIL, The conversion chemical heterogeneity of random butadiene-styrene copolymers, (1) 20
STEPHENS, H. L., see PORTER, L. S., (2) 361
STEWART, C. W., see ANOLICK, C., (4) 871
STIEHLER, A. D., G. E. DECKER, AND G. W. BULLMAN, Determination of hardness and modulus of rubber with spherical indentors, (2) 255
- TABAR, R. J., P. C. KILLGOAR, AND R. A. PETT, A fatigue resistant polychloroprene compound for high temperature dynamic applications, (4) 781
TAYLOR, R. P., see PHILLIPS, B. A., (4) 864
THOMAS, A. G., see SOUTHERN, E., (5) 1008
TIMAR, J., AND W. S. EDWARDS, Compounding bromobutyl for heat resistance, (2) 319
TOKITA, N., Analysis of band formation in mill operation, (2) 387
- URBON, J. P., see KNILL, R. B., (2) 428
- VAIDYA, U. I., Flame retarded EPDM integral insulation jacket compositions with excellent heat resistance and electrical stability (Abstract), (2) 430
VANDERMAR, B. C., Reciprocating and static seals for automatic transmissions (Abstract), (4) 900
VAN OOIJ, W. J., Fundamental aspects of rubber adhesion to brass plated steel tire cords, (3) 605
VEITH, A. G., AND V. E. CHIRICO, A quantitative study of the carbon black reinforcement system of tire tread compounds, (4) 748
VIAL, T. M., A new specialty elastomer from thiidiethanol (Abstract), (4) 900
- WAGNER, M. P., AND N. L. HEWITT, New developments in a dynamic wire adhesion test, (4) 805
WALTER, J. D., AND H. P. PATEL, Approximate expressions for the elastic constants of cord-rubber laminates, (4) 710
—, see LOU, A. Y. C., (4) 792
WALTERS, S. J., see SCHOENBERG, E., (3) 526
WAN IDRIS, W. Y., see FREAKLEY, P. K., (1) 134
WARRICK, E. L., O. R. PIERCE, K. E. POLMANTEER, AND J. C. SAAM, Silicone elastomer developments, (3) 437
WEAVER, E. J., see PATEL, A. C., (2) 429
WEI, Y. K., see BRIGGS, G. J., (4) 897
WEIR, D. F., see MEIER, J. F., (1) 50
WEST, J. R., AND C. E. MC CORMICK, Assessing the relationship of carbon black properties to rolling resistance of a tread compound containing carbon black (Abstract), (4) 896
WILDER, C. R., AND H. E. RAILSBACK, Repeatability of modulus specification testing of carbon black (Abstract), (4) 895
WILLIAMS, R. L., see CADLE, S. H., (1) 146
WORM, A. T., see BRULLO, R. A., (4) 902
- YAMASHITA, S., see MINOURA, Y., (5) 920
YEH, G. S. Y., see FALENDER, J. R., (2) 425
- ZEEMAN, P., see LAUTENSCHLAEGER, F. K., (5) 1030

SUBJECT INDEX*

- Abrasion, theory of, (5) 1008
Abrasion resistance, carbon black-containing elastomers, (2) 427
tire tread compounds, (4) 748
Abstracts of papers: Fall 1978 Meeting, (2) 425; Spring 1979 Meeting, (4) 895
Accelerators, dithiodiomorpholine, for high temperature vulcanization, (5) 985
efficiency, in model compound vulcanization, (5) 1030
level effect on model compound vulcanization, (2) 213
model compound vulcanization using, (5) 1030
Acrylic elastomers, properties of, (1) 173
Acrylic resin, tire cord adhesive application, (4) 898
Acrylonitrile-butadiene copolymers, see Nitrile Rubber
Acrylonitrile content, effect on NBR fuel permeability, (2) 331
Activation energy, effect on reference temperature optimization for curing cycles, (2) 286
Adhesion, rubber, mechanism of, (1) 23
rubber-brass (review), (3) 605
rubber-cord, measurement of, (2) 232
rubber-wire, dynamic test for, (4) 805
Adhesives, elastomers role in, (4) 901
peel mechanics of, (5) 1057
pressure-sensitive, dynamic modulus of, (2) 278
silicone rubber applications in (review), (3) 437
tire cord, acrylic resin in, (4) 898
Adiabatic analysis, of rubber heat engine, (1) 159
Aerospace applications, silicone elastomers (review), (3) 437
Aging, measurement of, (2) 232
Air permeability, of polynorbornene, (2) 435
Air pollution, tire contribution to, (1) 146
Akasaka-Hirans equation, elastic constants of rubber-cord composites, (4) 710
Alfin catalyst, isoprene polymerization (review), (3) 526
Alkali, isoprene polymerization catalysts (review), (3) 526
Antimony oxide, use in flame retardant EPDM jacket insulation, (2) 430
Antioxidant, bound, from N-phenyl nitrones, (5) 949
bound, in NBR fuel hose, (4) 883
effect on bromobutyl heat resistance, (2) 319
Antiozonant, mechanism of elastomer protection, (4) 823
Attenuated total reflectance spectroscopy (ATR), use in NR antiozonant study, (4) 823
Authors, Guide for, (3) G63
Automobile fascia, reaction injection molding of, (4) 864
Automotive applications, of silicone rubber (review), (3) 437
Automotive hose, NBR in, (4) 883
Backrolling, prevention of during rubber milling, (2) 387
Balata, chemistry and structure of, (4) 693
Banbury, see internal mixer
Band formation, analysis of during milling, (2) 387
Band formation index, use in rubber milling, (2) 387
Benzoyl peroxide, crosslinking agent for poly(dimethylsiloxane), (2) 425
Best Paper Awards, Fall 1978 Meeting, (2) G36; Spring 1979 Meeting, (5) G104
Biomedical applications, of silicone rubber (review), (3) 437
Bis(2-ethylamino-4-diethylamino-6-triisopropylbenzene, curative for EPDM cable insulation, (2) 431
Blends (see also specific materials), high temperature vulcanization of, (4) 725
Block copolymers, entanglement plateau in the dynamic modulus of, (2) 278
Bloom, rubber adhesion effect, (1) 23
Bonding agents, effect on rubber-brass adhesion (review), (3) 605
Book reviews, "Developments in Polymer Characterization—I", (3) G71
"Developments in Polyurethane", (5) G108.
"Elastomer Criteria for Engineering Design", (5) G109
"Handbook of Thermoplastic Elastomers", (4) G98
"Kautschuk Lexicon", (1) G25
"Physical Testing of Rubbers", (4) G98
"Rubber Chemistry", (3) C71
"Science and Technology of Polymer Processing", (5) G108
"Science and Technology of Rubber", (1) G25
"The Vanderbilt Rubber Handbook", (1) G25
"Theory and Practice of Engineering with Rubber", (2) G50
Boric acid, esters of, chlorinated polyethylene stabilizers, (2) 434
Brass adhesion to rubber (review), (3) 605
Brass adhesion, dynamic test for, (4) 805

* Prepared by L. E. Gwin.

- Bromine, flame suppressing mechanism of, (2) 430
Bromobutyl rubber (BIR), heat resistance of, (2) 319
Burst strength, of oriented fiber-reinforced hose, (4) 838
Bushing, NR, guayule, and IR comparison in, (2) 361
Butadiene, copolymer with styrene, entanglement plateau in dynamic modulus of, (2) 278
Butadiene-acrylonitrile rubber, see Nitrile Rubber
Butadiene-styrene rubber, see styrene-butadiene rubber
Butyl rubber (IIR), electrical cable specifications for, (2) 431
- Cable, electrical, specifications for, (2) 431
Cable insulation, continuous vulcanization of, (2) 433
nonlead stabilizers for, (2) 434
peroxide curatives for EPDM, (2) 431
requirements in nuclear power plants, (2) 432
review of elastomers in, (2) 429
thermoplastic elastomers in, (2) 433
Cable, power, use of EPR insulation, (2) 410
Cadmium oxide, activation of fuel-resistant NBR, (2) 331
Calcium salt, of fatty acid, processing aid for cable insulation, (2) 434
Capillary rheometer, carbon black characterization with, (2) 429
use for void volume measurements, (4) 896
Carbon-13, use in NMR analysis of EPR, (1) 1
Carbon black, aggregation during mixing, (5) 1019
characterization using capillary rheometer, (2) 429
development outlook for, (2) 427
effect on EV-cured NR properties, (2) 263
effect on rubber processability, (1) 199
effect on SBR extrusion, (2) 294
graft polymer with IR, (1) 43
identification after recovery, (4) 896
modulus specification testing of, (4) 895
NR springs containing, (5) 996
processability effect of, (1) 187
property relation to rolling resistance, (4) 896
three dimensional characterization of, (2) 377
tire tread reinforcement, (4) 748
Carboset, see acrylic resin
Carpet, flammability of, (4) 871
Casew nut shell liquid, synthesis of 2-pentadecylbenzoquinone dioxime from, (2) 353
Castilla, chemistry and structure of NR from, (4) 693
Cellulose fiber, mixing with rubber, (4) 764
orientation in hose, (4) 838
- Chain scission, of NR at low temperatures, (4) 773
Chicke, chemistry and structure of NR from, (4) 693
Chlorine, flame suppressing mechanism of, (2) 430
Chloroprene rubber, see polychloroprene
Chromatography, gas, silicone rubber analysis (review), (3) 437
Chromatography, gas-liquid, accelerator efficiency evaluation using, (5) 1030
use in model compound vulcanization, (2) 213
Coatings, silicone rubber applications (review), (3) 437
Cobalt, bonding agents containing (review), (3) 605
effect on dynamic wire adhesion, (4) 805
Compression, uniaxial, effect on poly(dimethylsiloxanes), (1) 127
Compression creep, of elastomers, (1) 50
Compression set, of CR at high temperatures, (4) 781
of IR vulcanizates (review), (3) 526
Compression stress relaxation, of thermoplastic elastomer gaskets, (4) 902
Computer, continuous infrared vulcanization optimization, (2) 433
use for cure cycle reference temperature optimization, (2) 286
Contact adhesives, elastomers in, (4) 901
Continuous vulcanization, of EPDM, (4) 899
salt bath, of wire and cable insulation, (2) 432
Conversion, effect on chemical composition of random SBR, (1) 20
Coordination catalysts, for *cis*-polyisoprene (review), (3) 526
Copper, catalysis of NBR aging in sour gasoline, (2) 331
effect on dynamic brass-coated steel adhesion, (4) 805
Cord, steel, fracture mechanism of rubber laminates, (1) 96
Cord, tire, composites with rubber, (4) 792
Cost-performance analysis, of thermoplastic elastomers, (2) 435
Crack growth, in tires, measurement of, (2) 232
of rubber-cord laminates, (1) 96
Creep resistance, of elastomer formulations, (1) 50
Crosslink density, of EV-cured NR, (2) 263
effect on NR low temperature properties, (4) 773
effect on rubber adhesion, (1) 23
high temperature vulcanization effect on, (4) 725
of poly(dimethylsiloxanes) of varying site selectivity, (2) 425
of rubber networks, (2) 304
Crosslink distribution, elastomeric property effect on poly(dimethylsiloxane), (2) 425

- Crystallinity, in IR (review), (3) 526
Crystallization, cold, glass transition effect on, (1) 207
Cure kinetics, of peroxide-cured EPDM-divinylbenzene compounds, (1) 74
Cure mechanism, of acrylic elastomers, (1) 173
Cure properties, of guayule rubber, NR, and IR, (2) 361
N-cyclohexylbenzothiazole-2-sulfenamide, model compound vulcanization, (5) 1030
Cyclopolyisoprene formation during isoprene polymerization (review), (3) 526
- Delamination, of rubber-cord composites, (4) 792
Dental applications, silicone rubber (review), (3) 437
Dicumyl peroxide, curative for EPDM cable insulation, (2) 431
sulfur effect on EPDM cure, (1) 74
Die, extrusion, effects on oriented fiber hose reinforcements, (4) 838
Dielectric strength, of EPDM telephone drop wire, (2) 400
Differential scanning calorimetry (DSC), of litharge-elastomer dispersion decomposition, (4) 899
Diisocyanate, effect on liquid polyurethane properties, (5) 920
Dimensional analysis, use in mill band formation analysis, (2) 387
2,5-Dimethyl-2,5-di(*t*-butylperoxy)hexane, crosslinking agent for poly(dimethylsiloxane), (2) 425
N,N'-dioctyl-p-phenylenediamine, antiozonant mechanism in NR, (4) 823
Diol, effect on liquid polyurethane properties, (5) 920
Disk fatigue test, for dynamic wire adhesion, (4) 805
Dispersion, of carbon black, from rheographs, (5) of cellulose fibers in rubber, (4) 764
1,1-Di-*t*-butylperoxy-3,3,5-trimethylcyclohexane, sulfur effect on EPDM cure, (1) 74
Dithiocarbamate, curatives for heat resistant bromobutyl rubber, (2) 319
Dithiodimorpholine, accelerator for high temperature vulcanization, (5) 985
Divinylbenzene, sulfur effect on EPDM cure with, (1) 74
Drop wire, EPDM usage in, (2) 400
Dynamic mechanical properties, of peroxide-cured EPDM-divinylbenzene compounds, (1) 74
Dynamic properties, carbon black effect on, (5) 996
of CR at high temperatures, (4) 781
of guayule rubber, NR, and IR, (2) 361
- Edge effect, Mooney rheometer correction for, (5) 962
- Efficient vulcanization (EV), temperature and filler effects on NR, (2) 263
Elastic constants, of cord-rubber laminates, (4) 710
Elasticity index, pressure-temperature effects during SBR extrusion, (2) 294
Elasticity, of poly(dimethylsiloxane) during uniaxial compression and tension, (1) 127
theory of, local constraint effect on junctions, (1) 110
Elastomers, future research directions, (2) 426
Electrical properties, of silicone elastomers (review), (3) 437
Electrodes, silicone rubber use as (review), (3) 437
Electron microscopy, carbon black structure characterization, (2) 387
of peroxide-cured EPDM-divinylbenzene, (1) 74
Electronics, silicone rubber applications (review), (3) 437
Electrostatic force, rubber adhesion effect, (1) 23
Emissions, gas and particulate, from tires, (1) 146
Engine, heat, analysis and theory of, (1) 159
Entanglement, rubber network property effect of, (2) 304
Environment, silicone rubber impact on (review), (3) 437
Epichlorohydrin rubber, creep resistance of, (1) 50
processing agent for, (4) 902
Epoxidation, of IR (review), (3) 526
Epoxy groups, in silica-reinforced functionalized NBR, (1) 84
Epoxy resin, stabilizer for chlorinated polyethylene, (2) 434
Ethylene, latex flow stimulant, (2) 426
Ethylene copolymer, with methyl acrylate, carboxylated, (2) 426
with vinyl acetate, electrical insulation specifications for, (2) 431
Ethylene-propylene rubber (EPR), cable insulation requirements in nuclear power plants, (2) 432
creep resistance of, (1) 50
electrical cable specifications for, (2) 431
NMR analysis of, (1) 1
use for cable insulation, (2) 410
Ethylene - propylene - diene copolymer (EPDM), blend with polypropylene, (2) 429
carbon black characterization in, (2) 429
computer optimization of continuous vulcanization of, (2) 433
continuous vulcanization of, (4) 899
creep resistance of, (1) 50
extrusion shrinkage of, (1) 187
flame retardant insulation jackets of, (2) 430
peroxide curatives for, (2) 431
processing agent for, (4) 902

- sulfur effect on peroxide cure of, (1) 74
 telephone drop wire, use as, (2) 400
 Extrusion, carbon black effect on shrinkage, (1) 187
 continuous vulcanization of EPDM, (4) 899
 kinetics of shrinkage during, (1) 199
 oriented fiber in hose, (4) 838
 tread rubber, automatic control of, (4) 903
 ultrasonic measurements during, (2) 294
- Fatigue mechanism, of rubber-cord laminates, (1) 96
 Fatigue resistance, of CR vulcanizates, (4) 781
 Fatty acids, processing aids for cable insulation, (2) 434
 Fibers, cellulose, mixing of rubber composites, (4) 764
 orientation in hose, (4) 838
 silicone rubber reinforcement by (review), (3) 437
Ficus elastica, chemistry and structure of NR from, (4) 693
 Fill factor, effect on mixing uniformly, (1) 134
 Filler-polymer interaction, during high temperature vulcanization, (4) 725
 Film, polyester, peel mechanics of, (5) 1057
 Flammability, of carpet with CR foam underlayment, (4) 871
 Flame resistance, of electrical insulation, (2) 431
 of EPDM cable insulation, (2) 430
 Flame suppression, mechanics of, (2) 430
 Flex fatigue, of NR, (5) 996
 Flexural modulus, of polyurethanes, (4) 864
 Flow, elastomeric, in internal mixers, (1) 134
 Fluid resistance, of acrylic elastomer, (1) 173
 of polynorbornene, (2) 435
 of poly(thiodiethanol), (4) 900
 Fluorine, flame suppressing mechanism of, (2) 430
 Fluoroelastomers, automatic transmission seals, (4) 900
 decomposition of litharge dispersions in, (4) 899
 oil seals, (4) 901
 phosphonitrilic, developments in, (2) 426
 Foam, CR latex for carpet, (4) 871
 polyurethane, in automotive fascia, (2) 428
 silicone rubber applications (review), (3) 437
 Fractionation, of NR, (4) 693
 Fracture mechanics, of rubber-cord laminates, (1) 96
 rubber abrasion applications of, (5) 1008
 Free energy, elastic, polymer network effect, (1) 110
 Friction, rubber adhesion effect, (1) 23
 Fuel hose, bound antioxidants for NBR, (4) 883
 Fuel resistance, of NBR, (2) 331
- Gamma irradiation, crosslinking of poly-(dimethylsiloxane), (2) 425
 Gas chromatography, use for silicone rubber analysis (review), (3) 437
 Gas emissions, from passenger tires, (1) 146
 Gasket, thermoplastic elastomers in, (4) 902
 Gas-liquid chromatography, accelerator efficiency in model compounds, (5) 1030
 Gasoline, sour, NBR, resistance to, (2) 331, (4) 883
 Gel content, of NR, (4) 693
 Gel permeation chromatography (GPC), NR molecular weight distribution, (4) 693
 Glass, adhesion to rubber, (1) 23
 Glass transition temperature (T_g), cold crystallization effect, (1) 207
 rubber adhesion effect, (1) 23
 Gough-Tangorra equation, elastic constants for rubber-cord composites, (4) 710
 Green strength, improvement in SBR, (2) 426
 of radial tire compounds, (4) 897
 Guayule rubber, chemistry and structure of, (4) 693
 compounding variations with, (2) 361
 Guide for Authors, (3) G63
 Gutta-percha, chemistry and structure of NR from, (4) 693
- Halogen, flame suppressing mechanism of, (2) 430
 Halogenation, of IR (review), (3) 526
 Hardness, measurement with spherical indentors, (2) 255
 Heat build-up, measurement of in tires, (2) 232
 Heat engine, rubber, analysis of, (1) 159
 Heat resistance, of bromobutyl rubber, (2) 319
 of CR in dynamic applications, (4) 781
 of EPDM cable insulation, (2) 430
 of NBR, (2) 331
 of polynorbornene, (4) 903
 of quinoid vulcanized SBR, (2) 353
 of silicone elastomers (review), (3) 437
 Heterogeneity, chemical, of random SBR, (1) 20
 Hose, fiber orientation in, (4) 838
 garden, cellulose fiber in (4) 764
 NBR use for fuel, (4) 883
 silicone rubber applications in (review), (3) 437
 Hot melt adhesives, elastomers in, (4) 901
 H-H bonding systems, effect on dynamic wire adhesion, (4) 805
 rubber-brass adhesion effect (review), (3) 605
 Humidity, effect on rolling resistance, (1) 23
 Hydrogenation, of IR (review), (3) 526
 Hydrohalogenation, of IR (review), (3) 526
 Hydroperoxide, in gasoline. NBR resistance to, (2) 331
 Hydrosilation, silicone rubber cure (review), (3) 437

- Hysteresis, test methods for, in tires, (2) 232
- Image analysis, carbon black structure determination, (2) 377
- Inflation pressure, loss from tubeless tires, (5) 905
- Innerliner, inflation pressure loss through, (5) 905
- Infrared spectroscopy, ATR techniques for NR ozonization, (4) 823
- Infrared vulcanization, of power cable insulation, (2) 433
- Inhibitor, prevulcanization, high temperature vulcanization effect, (4) 725
- Injection molding, polyurethane automotive fascia by RIM, (4) 864
- Innerliner, cellulose fiber in, (4) 764
- Insulation, cable, nonlead stabilizers for, (2) 434
- cable, continuous vulcanization of, (2) 433
- cable, thermoplastic elastomer for, (2) 433
- electrical, EPDM telephone drop wire, (2) 400
- electrical, EPR for, (2) 410
- electrical, nuclear power plant requirements, (2) 432
- electrical salt bath curing of, (2) 432
- EPDM, peroxide curatives for, (2) 431
- wire, flame retardant EPDM, (3) 430
- wire, historical review of elastomers in, (2) 429
- Interlaminar shear, of cord-rubber composites, (4) 792
- Internal mixer, cellulose fiber dispersion in, (4) 764
- effect on functionalized NBR properties, (1) 84
- visualization of flow in, (1) 134
- Iodine, flame suppressing mechanism of, (2) 430
- Isoprene, copolymers with styrene, (2) 278
- properties of (review), (3) 526
- Laminates, rubber-cord, elastic constants for, (4) 710
- rubber-cord, fracture mechanics of, (1) 96
- rubber-cord, interlaminar shear strain, (4) 792
- Latex, NR, perspective and strategies, (2) 426
- Litharge, dispersions in fluoroelastomers, (4) 899
- Lithium, isoprene polymerization initiator (review), (3) 526
- Living polymers, carbon black grafts to, (1) 43
- Loss tangent, of copolymer pressure-sensitive adhesive, (2) 278
- Low temperature properties, of NR, (4) 773
- Magnesium oxide, curative for heat resistant bromobutyl rubber, (2) 319
- Mechanical analysis, of rubber heat engine, (1) 159
- Mechanical rubber goods (MRG), future research directions, (2) 428
- Mechanical properties, of carbon black-polysisoprene graft polymers, (1) 43
- of silicone rubber (review), (3) 437
- Melting point, effect on elastomer cold crystallization rate, (1) 207
- Membranes, silicone rubber applications (review), (3) 437
- Methyl acrylate, copolymer with ethylene, (2) 426
- 2-Methyl-2-pentene, model compound for NR vulcanization, (2) 213; (5) 1030, (5) 1044, (5) 1050
- Microstructure, of polyisoprene (review), (3) 526
- Milkweed, chemistry and structure of NR from, (4) 693
- Milling, band formation analysis during, (2) 387
- effect on functionalized NBR properties, (1) 84
- Mixing, of rubber-fiber composites, (4) 764
- visualization of, in internal mixers, (1) 134
- Model, elastomer, local constraint effect on junctions, (1) 110
- Model compound vulcanization, curative effects, (2) 213, (5) 1030, (5) 1044, (5) 1050
- Modulus, dynamic, entanglement plateau for block polymers, (2) 278
- measurement with spherical indentors, (2) 255
- of NR, (5) 996
- testing for carbon black specifications, (4) 895
- Mold making, silicone rubber applications (review), (3) 437
- Molecular weight between crosslinks (M_c), of EPDM-divinylbenzene compounds, (1) 74
- Molecular weight distribution, of NR, (4) 693
- Mooney equation, application to uniaxial compression and tension, (1) 127
- Mooney rheometer, edge effect correction, (5) 962
- Mooney viscosity, viscosity curves from, (1) 9
- Morphology, of peroxide-cured EPDM-divinylbenzene, (1) 74
- of rubber abrasion patterns, (5) 1008
- Natural rubber (NR), blends with SBR/BR, low temperature properties, (4) 735
- carbon black modulus specification in, (4) 895
- chain scission at low temperatures, (4) 773
- chemistry and structure of, (4) 693
- creep resistance of, (1) 50
- dithiodiomorpholine accelerators for, (5) 985
- electrical cable specifications for, (2) 431
- filler and temperature effect on EV cure, (2) 263
- high temperature vulcanization of, (4) 725
- ozonization of, (4) 823

- petroleum waxes in, (5) 973
 property comparison with guayule, (2) 361
 relation of modulus to model compound sulfidic product yield, (5) 1044
 research perspectives and strategies, (2) 426
- Neoprene, see polychloroprene
- Networks, rubber, structure calculation for multifunctional junctions, (2) 304
- Nitrile rubber (NBR), antioxidant-bound, (2) 426
 automatic transmission seals, (4) 900
 automotive fuel hose, (4) 883
 cable jacket insulation, (2) 434
 functionalized, for silicon reinforcement, (1) 84
 gasoline resistance of, (2) 331
 low temperature properties, (4) 735
 oil seals, (4) 901
 processing agent for, (4) 902
- Nitrones, bound antioxidants from, (5) 949
- Nuclear magnetic resonance (NMR), of EPR, (1) 1
- Nuclear power plant, cable insulation requirements, (2) 432
- Oil resistance, of acrylic elastomers, (1) 173
- Oil seals, design variants for, (4) 901
- Optical applications, of silicone rubber, (review), (3) 437
- Oscillating disk rheometer (ODR), carbon black dispersion estimation, (5) 1019
- Organocobalt compounds, dynamic wire adhesion effect, (4) 805
- Organs, artificial, silicone rubber for (review), (3) 437
- Oxidation, of IR (review), (3) 526
- Ozone resistance, of NR containing waxes, (5) 973
 petroleum waxes for improved, (4) 895
- Ozonization, surface study of NR, (4) 823
- Ozonolysis, of IR (review), (3) 526
- Particle emissions, from passenger tires, (1) 146
- Particle size, carbon black, dynamic property effect, (5) 996
- Peel adhesion, mechanism of, (1) 23
- Peel mechanics, of adhesives, (5) 1057
- 2-Pentadecylbenzoquinone dioxime, SBR vulcanization, (2) 353
- Peroxide, effect on chlorinated polyethylene tensile properties, (2) 434
 EPDM curative for wire and cable insulation, (2) 431
 sulfur effect on EPDM cure, (1) 74
- Petroleum wax, bloom of, (5) 973
 rubber ozone protection by, (4) 895
- N-phenyl nitrone, bound antioxidants in non-sulfur vulcanizates, (5) 949
- Photogrammetry, carbon black structure characterization, (2) 377
- Plasticizers, effect on chlorinated polyethylene tensile properties, (2) 434
 effect on CR high temperature dynamic properties, (4) 781
 effect on PVC plastisol rheology (review), (3) 676
 effect on SBR extrusion, (2) 294
 in bound antioxidant NBR fuel hose, (4) 883
 low temperature properties, effect on, (4) 735
- Plastics, technology transfer to rubber, (2) 429
- Plastisols, PVC, rheology of (review), (3) 676
- Pollution, air, tire contribution to, (1) 146
- Polyacrylates, automatic transmission seals, (4) 900
- elastomer, properties of, (1) 173
 future research trends, (2) 426
 low temperature properties of, (4) 735
 oil seals, (4) 901
 processing agent for, (4) 902
- Polybutadiene (BR), carbon black dispersion in, (5)
 cold crystallization rate of, (1) 207
 extrusion shrinkage in SBR blends, (1) 187
 improved chain linearity in *cis*-, (2) 426
 polyurethanes from, (5) 920
 SBR blends, low temperature properties, (4) 735
- Polychloroprene (CR), cable insulation in nuclear power plants, (2) 432
 cable jackets, (2) 434
 cold crystallization, rate of, (1) 207
 creep resistance of, (1) 50
 high temperature dynamic properties of, (4) 781
 later carpet underlayment, (4) 871
 low temperature properties, (4) 735
- Poly(dimethylsiloxane), see also silicone rubber crosslink distribution effect on properties, (2) 425
 elasticity of, (1) 127
- Polyepichlorohydrin rubber, future developments, (2) 426
- Polyesters, fiber, use in rubber heat engines, (1) 159
 films, peel mechanics of, (5) 1057
 stabilizers for chlorinated polyethylene, (2) 434
- Polyethylene, chlorinated, stabilizer effect on properties, (2) 434
 chlorosulfonated, cable insulation requirements in nuclear power plants, (2) 432
 chlorosulfonated, salt bath curing of, (2) 432
 crosslinked, use in cable insulation, (2) 410
 use in EPDM cable insulation, (2) 430
- Poly(ethylene terephthalate), peel mechanics for, (5) 1057
- Polyisoprene (IR), bound antioxidants for, (5)
 carbon black graft, mechanical properties, (1) 43
 cold crystallization of, (1) 207

- comparison with guayule, (2) 361
reactions of (review), (3) 526
structure of (review), (3) 526
- Polynorbornene (PNR), heat resistance of, (4) 903
fluid resistance of, (2) 435
- Polyol, polyurea-containing, RIM applications, (4) 864
- Polypropylene, EPDM blend, (2) 429
impact-resistant, (2) 429
- Polystyrene, high impact, (2) 429
- Poly(thiodiethanol), preparation of, (4) 900
- Polyurea, dispersions for RIM applications, (4) 864
- Polyurethane, block polymers, (2) 429
elastomer, creep resistance of, (1) 50
elastomer, from BR, (5) 920
foam, future research in non-tire uses, (2) 428
RIM of automotive fascia, (4) 864
- Poly(vinyl chloride) (PVC), cable jacket, usage, (2) 434
electrical cable, specifications for, (2) 431
plasticsols, rheology of (review), (3) 676
- Power cable, EPR in, (2) 410
- Pressure, loss from tubeless tires, (5) 905
- Pressure sensitive adhesives, elastomers in, (4) 901
- Prevulcanization inhibitor, high temperature vulcanization effect, (4) 725
- Printing, silicone rubber uses in (review), (3) 437
- Process oil, effect on carbon black reinforcement, (4) 748
- Processability, carbon black effect on, (1) 187, (1) 199
- Processing aid, cable insulation uses, (2) 434
use in elastomers, (4) 902
- Propylene, copolymer with ethylene, NBR analysis of, (1) 1
- Prostheses, silicone rubber use in (review), (3) 437
- Quinoid, SBR vulcanization with, (2) 353
- Reaction injection molding (RIM), of polyurea dispersions, (4) 864
- Reinforcement, mechanism, for carbon black-containing elastomers, (1) 43
of silicone elastomers (review), (3) 437
- Relaxation, mechanism, during extrusion shrinkage, (1) 199
molecular, effect on extrusion shrinkage, (1) 187
- Reproduction control, silicone rubber for (review), (3) 437
- Resilience, of IR vulcanizates (review), (3) 526
- Rheograph, carbon black dispersion estimated from, (5) 1019
- Rheology, of fiber suspensions, (4) 838
of PVC plasticsols (review), (3) 676
- Rheometer, capillary, carbon black characterization, (2) 429
capillary, void volume measurements, (4) 896
- Mooney, edge effect correction, (5) 962
Mooney, viscosity curves from, (1) 9
- Rolling index, test method for, (4) 896
Rolling resistance, carbon black effect on, (4) 896
crosslinked SBR effect on, (4) 897
reduction of, in tires, (2) 428
- Rotor effect, on viscosity curves obtained with Mooney Rheometer, (1) 9
- Rubber-cord laminates, fracture mechanics of, (1) 96
- Rubber Division, ACS, bylaws, (1) G10
Best Paper Awards, (2) G36, (5) G104
Charles Goodyear Medalist, (3) G73
Guide for Authors, (3) G63
History of Best Paper Awards, (2) G37
Library and information service, (1) G8, (2) G38, (3) G60, (4) G95
Officers and committees (1) G1, (2) G33, (3) G57, (4) G87, (5) G101
Policy on technical papers (1) G23, (2) G48, (3) G62, (4) G97, (5) G107
Program for Fall meeting 1979, (4) G90
Program for Spring meeting 1979, (1) G5
Statistics on 1978 Rubber Chemistry and Technology Papers, (4) G94
- Salt bath, continuous vulcanization of wire and cable insulation, (2) 432
- Scanning electron microscopy, ozone attack of NR, (4) 823
- Seals, automatic transmission, (4) 900
rotary shaft, (4) 901
silicone rubber uses (review), (3) 437
- Sequence distribution, of ethylene-propylene copolymers, (1) 1
- Shrinkage, extrusion, carbon black effect, (1) 187
extrusion, kinetics of, (1) 199
- SI units, use and conversion factors, (1) G24, (2) G49
- Silicone rubber, creep resistance of, (1) 50
developments (review), (3) 437
effect of crosslink distribution on properties, (2) 425
electrical cable specifications for, (2) 431
processing aid, for, (4) 902
uniaxial compression and tension, (1) 127
- Solution polymerization, of isoprene (review), (3) 526
- Solvent resistance, of polynorbornene, (2) 435
- Sour gasoline, NBR resistance to, (4) 883
- Springs, rubber, carbon black selection for, (5) 996
- Stabilizer, effect on chlorinated polyethylene tensile properties, (2) 434
- Steel, brass-coated, adhesion to rubber (review), (3) 605
fracture mechanics of rubber composites, (1) 96
- Squalane, model compound for EPDM, (1) 74

- Storage modulus, of pressure-sensitive adhesives, (2) 278
- Strain, effect on junction displacement of polymer chains, (1) 110
- Stress, shear calculation from Mooney rheometer torque, (1) 9
- Structure, carbon black, characterization of, (2) 377
- carbon black, determination from extrusion shrinkage, (1) 187
- carbon black, effect on dynamic properties, (5) 996
- carbon black, effect on tire tread reinforcement, (4) 748
- Styrene-butadiene rubber (SBR), BR blends, low temperature properties, (4) 735
- carbon black characterization in, (2) 429
- carbon black dispersion in, (5) 1019
- carbon black modulus specification in, (4) 895
- carpet underlays, (4) 871
- chemical heterogeneity of, (1) 20
- creep resistance of, (1) 50
- electrical cable specifications for, (2) 431
- emissions from passenger tires, (1) 146
- entanglement plateau in dynamic modulus of, (2) 278
- extrusion shrinkage of, (1) 187
- green strength of, (2) 426, (4) 897
- kinetics of extrusion shrinkage, (1) 199
- ultrasonic measurements during extrusion, (2) 294
- vulcanization with 2-pentadecylbenzoquinone dioxime, (2) 353
- Styrene copolymers, with isoprene, entanglement plateau in dynamic modulus of, (2) 278
- Sulfur, EPDM peroxide cure effect of, (1) 74 level effect in dynamic wire adhesion, (4) 805
- model compound vulcanization with, (2) 213
- Sulfidization, brass-rubber adhesion effect (review), (3) 605
- Surface area, carbon black, reinforcement effect, (4) 748
- Tackifiers, effect on entanglement plateau of block polymer dynamic modulus, (2) 278
- Tear resistance, of IR (review), (3) 526
- Telephone drop wire, EPDM in, (2) 400
- Temperature, reference, optimization for curing cycles, (2) 286
- vulcanization, effect on EV-cured NR, (2) 263
- Tensile creep, of elastomers, (1) 50
- Tensile strength, of IR (review), (3) 526 test methods for, (2) 232
- Tension, uniaxial, effect on poly(dimethylsiloxane), (1) 127
- Thermal black, effect on NBR aging in sour gasoline, (2) 331
- Thermogravimetric analysis (TGA), of litharge-elastomer dispersions, (4) 899
- of rubber heat engine, (1) 159
- Thermomechanical analysis, low temperature properties, (4) 735
- Thermoplastic elastomers, cable insulation, (2) 433
- cost-performance analysis, (2) 435
- from NR, (2) 426
- gasket uses, (4) 902
- Thiodiethanol, polymerization of, (4) 900
- Tire compounds, green strength of, (4) 897
- Tire cord, acrylic resin adhesives for, (4) 898
- elastic constant for rubber laminates, (4) 710
- interlaminar shear deformations in rubber composites, (4) 792
- steel, adhesion to rubber (review), (3) 605
- trends in tire technology, (2) 428
- Tire emissions, gas and particulate, (1) 146
- Tires, dynamic wire adhesion test for, (4) 805
- inflation pressure loss in, (5) 905
- technology of, current trends, (2) 428
- Tire tread, automatic extrusion of, (4) 903
- carbon black reinforcement of, (4) 748
- dithiomorpholine accelerators for, (5) 985
- Torque analysis, of rubber heat engine, (1) 159
- Toxicology, of isoprene (review), (3) 526
- Transmission seals, development of, (4) 900
- Tread, tire, automatic extrusion of, (4) 903
- Treadwear, carbon black effect on, (4) 748
- Triazine, NR accelerators from, (5) 1050
- Trimellitic acid, triesters, chlorinated polyethylene stabilizers, (2) 434
- Tubeless tires, inflation pressure loss in, (5) 905
- Ultrasonics, use in rubber extrusion, (2) 294
- Uniformity, mix, visualization of in internal mixers, (1) 134
- V-belt, cellulose fibers in, (4) 764
- Vinyl acetate, copolymer with ethylene, electrical insulation specifications for, (2) 431
- Viscoelasticity, dynamic of liquid polyurethane, (5) 920 test methods for, (2) 232
- Viscosity, complex, calculation using Mooney rheometer, (1) 9 steady state, calculation of, (1) 9
- Void volume, carbon black identification using, (4) 896
- Vulcanization, continuous, of wire and cable insulation, (2) 432 free radical, of silicone rubber (review), (3) 437
- high temperature, (4) 725
- infrared, of power cable insulation, (2) 433
- model compound, curative effect on, (2) 213, (5) 1030, (5) 1044, (5) 1050
- radiation-induced, of silicone elastomers (review), (3) 437
- room temperature, of silicone elastomers (review), (3) 437
- test methods for properties during, (2) 232

- Water resistance, of EPR power cables, (2) 410
- Wax, petroleum, bloom of, (5) 973
ozone protection of rubber by, (4) 895
- Whiting, NR property effect of, (2) 263
- Wire adhesion, dynamic test for, (4) 805
- Wire insulation, flame retardant EPDM, (2) 430
peroxide curatives for EPDM, (2) 431
review of elastomers in, (2) 429
thermoplastic elastomer for, (2) 433
- X-ray, interlaminar shear deformations in rubber-cord composites, (4) 792
- X-ray diffraction, of liquid polyurethanes, (5) 920
- Young's modulus, of cord-rubber composites, (4) 710
of peroxide-cured EPDM-divinylbenzene compounds, (1) 74
of silica-reinforced functionalized NBR, (1) 84
- Zinc, adhesion to rubber (review), (3) 605
- Zinc oxide, curative for heat resistant bromobutyl rubber, (2) 319
effect on model compound vulcanization, (2) 213

